



## **Developing an Integrated Historical and Predictive Customer Profitability Model for Customer Acquisition in the Banking Industry**

**\*Rudianto Suryo Binantoro**

IPB University, Indonesia

**Syamsul Ma'arif**

IPB University, Indonesia

**Linda Karlina Sari**

IPB University, Indonesia

**Zenal Asikin**

IPB University, Indonesia

---

**\*Corresponding author:**

Rudianto Suryo Binantoro, IPB University,  
Indonesia. ✉[rudiantosuryo@apps.ipb.ac.id](mailto:rudiantosuryo@apps.ipb.ac.id)

---

**Article Info:**

**Article history:**

Received: June 29, 2026

Revised: August 14, 2026

Accepted: August 18, 2026

Available Online: August 28, 2026

---

**Keywords:**

Banking, Customer Acquisition,  
Customer Profitability Analysis,  
Predictive Analytics, Soft Systems  
Methodology



This is an open access article under the [CC BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license.

Copyright © 2026 by Author. Published by  
Politeknik Siber Cerdika International

---

**Abstract**

**Background:** Banking customer acquisition is often assessed using volume-based indicators, which may encourage growth without adequately considering customer profitability. Although Customer Profitability Analysis (CPA) provides a more comprehensive basis for evaluating customer economic value, its application in banking remains fragmented and predominantly historical, limiting its use in acquisition decision-making.

**Objective:** This study aims to develop an integrated historical and predictive Customer Profitability Analysis model to support value-based customer acquisition decisions in the banking sector.

**Methods:** A qualitative approach was employed using Soft Systems Methodology (SSM) and a comparative case study of two national commercial banks. Data were collected through document analysis and stakeholder insights, focusing on three critical acquisition stages: prospect identification and qualification, needs analysis and solution design, and proposal presentation and negotiation.

**Results:** The findings indicate that CPA implementation remains partial and is constrained by the absence of standardized profitability frameworks, limited predictive capabilities, fragmented data integration, and silo-based decision-making. These limitations result in suboptimal customer acquisition and package-deal decisions. The study therefore develops an integrated conceptual model combining historical and predictive CPA, supported by real-time profitability simulation and cross-functional integration.

**Conclusion:** Integrating historical and predictive CPA into the customer acquisition process can strengthen data-driven, value-oriented decision-making. The proposed model contributes a corporate-level CPA framework, a profitability-based approach for evaluating package deals, and a customer profitability mapping mechanism for acquisition prioritization, supporting more sustainable growth and improved customer portfolio quality.

---

**To cite this article:** Binantoro, R. S., Ma'arif, S., Sari, L. K., & Asikin, Z. (2026). Developing an integrated historical and predictive customer profitability model for customer acquisition in the banking industry. *INKUBIS: Jurnal Ekonomi dan Bisnis*, 8(3), 1936-1947. <https://doi.org/10.59261/inkubis.v8i3.409>

---

### **INTRODUCTION**

In an era of increasingly data-driven business competition, a company's success is no longer determined solely by the volume of new customer acquisitions, but by its ability to acquire customers who generate sustainable economic value (Fast et al., 2023; McKinsey Global Institute, 2016; Sorescu, 2017). Many organisations continue to evaluate acquisition performance using conventional indicators such as the number of new customers, portfolio growth, or market share,

without adequately assessing whether these customers contribute to long-term profitability (Papadakis & Thanos, 2010). This approach can lead to unprofitable growth, where an increase in business volume is accompanied by declining margins and rising cost pressures.

Empirical evidence underscores the importance of this issue in the banking sector. Research indicates that a significant proportion of banking customers—estimated between 20 and 40 percent—generate negative economic returns when the full cost-to-serve is accurately attributed (Helgesen, 2007; van Raaij et al., 2003). More recent analyses indicate that financial institutions relying predominantly on volume-based growth strategies may experience weaker returns and greater risk exposure when customer profitability is not incorporated into acquisition decisions (Kamal, 2025). Evidence from banking markets also suggests that incorporating profitability criteria into customer acquisition can improve marketing efficiency and portfolio quality (Lueg & Ilieva, 2024). These findings highlight the importance of integrating profitability analysis at an early stage of the customer acquisition process (Awais, 2024).

In response to this challenge, Customer Profitability (CP) and Customer Lifetime Value (CLV) have emerged as important frameworks for assessing customer economic value (Ali & Shabn, 2024). Unlike traditional product- or business unit-based performance measures, CP evaluates profitability at the individual customer level by incorporating revenue, cost-to-serve, funding costs, and credit risk.

Prior studies demonstrate that integrating customer profitability into strategic decision-making can improve marketing efficiency, customer portfolio quality, and long-term financial performance (Rodriguez-Garcia et al., 2025; Viviani et al., 2023). However, most CP applications remain historical and descriptive, focusing primarily on realised performance. This limits their strategic relevance in dynamic business environments, where customer value needs to be assessed before and during acquisition. Advances in business analytics, machine learning, and artificial intelligence provide opportunities to complement historical analysis with predictive approaches that estimate the potential profitability of prospective customers.

Despite these advancements, customer acquisition processes such as lead scoring remain largely oriented toward conversion probability and volume-based indicators rather than long-term economic value. Sargeant (2023) show that contemporary lead scoring systems do not fully incorporate profitability variables, creating a risk that firms prioritise customers who are easier to acquire but less valuable economically. This misalignment is particularly relevant in banking, where bundled products, service costs, funding costs, and credit risk make customer profitability more complex to assess. Without profitability-driven segmentation, relationship manager efforts and marketing resources may be directed toward prospects with limited or negative long-term economic value, potentially weakening portfolio quality and constraining sustainable growth (Kaplan, 1996).

Recent studies further emphasise the importance of profit-driven decision-making, where predictive models are considered not only in terms of statistical accuracy but also their financial implications. Gómez Vargas (2025) demonstrate that integrating behavioural prediction with profit-based optimisation can improve decision outcomes compared with traditional classification approaches. These findings reinforce the need for models that position customer profitability more explicitly within acquisition decision-making.

A comparative synthesis of the literature reveals several limitations. Predictive analytics can be valuable for customer value estimation, but existing studies are predominantly situated in retail and e-commerce contexts, which differ from corporate banking in terms of relationship-based cost structures and risk assessment. Chinta (2023) extend the discussion to acquisition decisions but focus more strongly on predictive or classification performance than on organisational process integration. Meanwhile, Raffoni et al. (2018) examine CPA in banking performance management but focus on historical analysis rather than predictive modelling integrated into acquisition processes. Taken together, these studies indicate a gap in an integrated framework that combines historical and predictive CPA within a structured, process-embedded decision-making system for banking customer acquisition.

This gap is particularly important in corporate banking because customer relationships involve bundled products, cross-subsidisation, and multidimensional risk assessment. At the same time, predictive capabilities are not always embedded in organisational workflows,

especially during prospect identification, solution design, and negotiation. Profitability tools may also operate in functional silos, reducing their usefulness for cross-functional decisions. To address these interconnected issues, this study uses a qualitative approach based on Soft Systems Methodology (SSM) to develop an integrated customer profitability model that connects historical and predictive perspectives within a structured decision-making system.

The contribution of this study lies in three dimensions. First, at the conceptual level, it develops a dual-mode CPA framework that combines historical and predictive customer profitability analysis for the corporate banking customer acquisition context, allowing existing and prospective customers to be evaluated through an integrated profitability perspective across the sales pipeline. Second, at the methodological level, it applies Soft Systems Methodology (SSM) to map, diagnose, and redesign CPA-related decision-making processes across the acquisition stages. Third, at the practical level, it develops a profitability-based package-deal evaluation approach and a real-time decision-support concept for Relationship Managers. These contributions extend existing CPA and CLV research, which has largely focused on customer retention, segmentation, and marketing optimisation rather than the integration of profitability analysis into acquisition-stage decision-making.

Therefore, this study aims to develop an integrated historical and predictive Customer Profitability Analysis (CPA) model to support value-based customer acquisition decision-making in the banking sector. Theoretically, the study extends customer value analytics by connecting retrospective profitability evaluation with forward-looking decision-making and by applying SSM to a financial management context. Practically, the proposed framework provides a basis for profitability-based customer targeting, package-deal evaluation, and real-time profitability simulation for Relationship Managers. In this way, CPA is positioned not only as a performance reporting mechanism but also as a process-embedded analytical instrument for supporting customer acquisition decisions in complex B2B banking environments.

## METHOD

This study employed a qualitative approach using Soft Systems Methodology (SSM) to develop a conceptual model of customer profitability in the banking context. SSM is selected as it enables the systematic analysis of complex, unstructured organizational problems involving multiple stakeholders and interdependent decision-making processes ([Checkland, 1988](#); [Checkland & Poulter, 2006](#)). The research follows four key stages of SSM: (1) problem situation analysis, including construction of rich pictures to map stakeholder interactions and systemic tensions; (2) root definition formulation using CATWOE analysis; (3) conceptual model development derived from the root definitions; and (4) comparison of the conceptual model with real-world conditions to identify gaps and formulate feasible improvement actions. A comparative case study design is applied, involving two national commercial banks that differ in their approaches to customer performance measurement, one relying on Unit Profitability and the other having adopted Customer Profitability as the primary KPI. This contrast enables a cross-case examination of current practices in customer acquisition and profitability analysis.

Data were collected through document analysis and stakeholder insights from both banks, focusing on three critical stages of the customer acquisition process: prospect identification and qualification, needs analysis and solution design, and proposal presentation and negotiation. The data collection covered internal organizational practices, KPI frameworks, and decision-making processes relevant to customer profitability analysis, involving key internal stakeholders such as management, Relationship Managers, sales units, and supporting functions including operations, accounting, and information technology. Data were subsequently analyzed using the SSM framework, through which rich pictures were developed to represent the complexity of the problem situation, root definitions were formulated using CATWOE analysis, and the resulting conceptual model was compared against real-world conditions to identify gaps and improvement opportunities.

## RESULTS AND DISCUSSION

### Results

The findings of this study are presented following the stages of Soft Systems Methodology

(SSM), which is designed to address complex and unstructured organisational problems. The analysis begins with the identification and structuring of the problem situation, followed by the development of rich pictures to capture the complexity of stakeholder interactions. Subsequently, root definitions are formulated using CATWOE analysis, which serve as the basis for constructing conceptual models. These models are then compared with real-world conditions to identify gaps and areas for improvement, leading to the formulation of feasible and desirable changes.

In this study, the application of SSM is specifically focused on the customer acquisition process in the banking sector, enabling the development of an integrated Customer Profitability Analysis model that combines historical and predictive perspectives.

### **Problem Situation**

An analysis of the issues at two national commercial banks reveals fundamental differences in their approaches to performance measurement, particularly in the use of key performance indicators (KPIs). The first bank continues to rely on Unit Profitability as its primary KPI, while the second bank has begun adopting Customer Profitability. This distinction significantly influences how each bank manages customer acquisition and formulates strategic decisions related to long-term growth and profitability. This finding is consistent with prior studies which highlight that traditional performance metrics, when not aligned with customer-level profitability, may lead to suboptimal decision-making and unprofitable growth.

Within the context of the banking sales cycle, particularly in the corporate (B2B) segment, business processes typically span from prospect identification to customer retention. However, this study focuses on three critical stages: (1) prospect identification and qualification, (2) needs analysis and solution design, and (3) proposal presentation and negotiation. These stages are crucial as they directly determine acquisition outcomes and are highly dependent on the quality of customer profitability analysis. Existing literature emphasises that early-stage customer evaluation plays a critical role in determining long-term customer value and profitability.

At banks that rely on Unit Profitability, decision-making across these stages remains fragmented and is not based on holistic customer value. During the prospect identification stage, customer selection is primarily driven by business volume rather than economic value, reflecting a volume-oriented acquisition approach. In the needs analysis and solution design stage, the development of package deals remains constrained by siloed organisational structures, limiting the ability to optimise overall customer profitability. Furthermore, during the negotiation stage, the absence of real-time profitability analysis tools restricts the ability to evaluate the financial implications of pricing decisions, which is contrary to recent findings that advocate for profit-driven decision-making models.

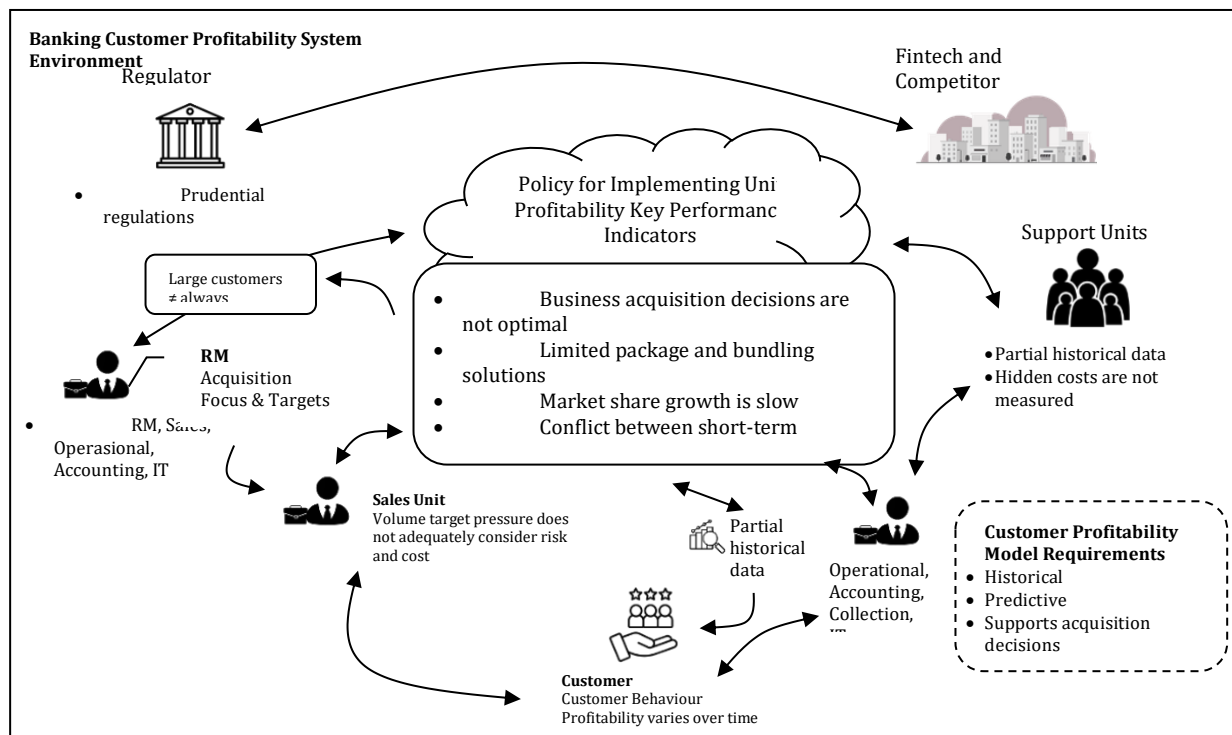
Conversely, at banks that have begun adopting Customer Profitability, a more integrated approach to customer management is observed. However, implementation challenges persist, including the absence of comprehensive predictive CPA models, limited availability of historical data, and insufficient integration of revenue, cost, and risk components. These limitations are aligned with previous studies which indicate that most CPA implementations remain descriptive and backward-looking, with limited integration of predictive analytics.

The problem situation is further complicated by the involvement of multiple stakeholders. Internally, management, Relationship Managers, sales units, and supporting functions such as operations, accounting, and information technology play critical roles in decision-making and data provision. However, conflicting objectives—particularly between short-term volume targets and long-term profitability—often create organisational misalignment. Externally, regulatory constraints related to risk and pricing, along with increasing competition from banks and fintech firms, intensify the pressure to achieve rapid yet sustainable growth. These interacting factors create a complex system, consistent with the characteristics of ill-structured problems addressed by Soft Systems Methodology.

Overall, the findings indicate that Customer Profitability Analysis, both historical and predictive, has not been fully and systematically implemented in either bank. The absence of an integrated profitability framework across the three critical stages of the sales process leads to suboptimal package-deal outcomes and, in some cases, stagnation or failure in customer acquisition. This condition reinforces the research gap identified in the literature, namely the lack

of integrated models that combine historical and predictive CPA to support acquisition decision-making. Therefore, this study emphasises the need to develop an integrated Customer Profitability Analysis model that enables more effective, value-based, and sustainable customer acquisition strategies.

The complexity of the problem situation is illustrated through a rich picture, which maps the key stakeholders, processes, and challenges within the banking customer profitability system. As depicted in Figure 1, the current environment is influenced by fragmented KPI usage, limited data availability, and competing organizational objectives, highlighting the need for a more integrated Customer Profitability Analysis framework.



**Figure 1.** Rich Picture of the Customer Profitability System and Stakeholder Interactions in Banking

## Root Definition

Based on the results of identifying problematic situations in the previous stage, the issues identified are then translated into relevant activity systems through the formulation of a Root Definition (RD). In the Soft Systems Methodology (SSM) approach, the Root Definition serves to clearly define the desired system (purposeful activity system) by considering its objectives, transformation processes, and the parties involved.

In this study, the Root Definition was formulated by referring to three main stages in the banking customer acquisition process chain, namely: (1) prospect identification and qualification, (2) needs analysis and solution design, and (3) proposal presentation and negotiation. Each of these stages is translated into a single Root Definition that represents the activity system that needs to be developed to address the identified problems, particularly those related to the limitations of applying historical and predictive Customer Profitability Analysis (CPA).

The first R&D initiative focuses on developing a profitability-based prospect identification and qualification system, aimed at ensuring that the customer selection process is based on long-term economic value potential, rather than just business volume. The second R&D initiative focuses on an integrated solution design system (package deal) that optimizes the full potential of products and the customer ecosystem using a predictive CPA approach. Meanwhile, the third RD focuses on a real-time profitability-based negotiation and decision-making system to ensure that every business agreement reached continues to provide optimal value for the bank.

These three Root Definitions are then further analyzed using the CATWOE framework (Customers, Actors, Transformation, Weltanschauung, Owners, and Environmental constraints)

to ensure that the formulated system is relevant to real-world conditions, considers stakeholder perspectives, and is operationally implementable (Appendix 1). Through this approach, the Root Definitions serve not only as a description of the ideal system but also as the foundation for developing an integrated conceptual model in the subsequent stages.

To enable readers to follow the analytical logic without consulting the appendix, [Table 3](#) Table 1 presents a condensed summary of the CATWOE analysis underlying the three Root Definitions. This analysis ensures that each Root Definition reflects the relevant stakeholders, the intended transformation process, the worldview underpinning the system, and the environmental constraints within which the system must operate (Checkland & Poulter, 2006).

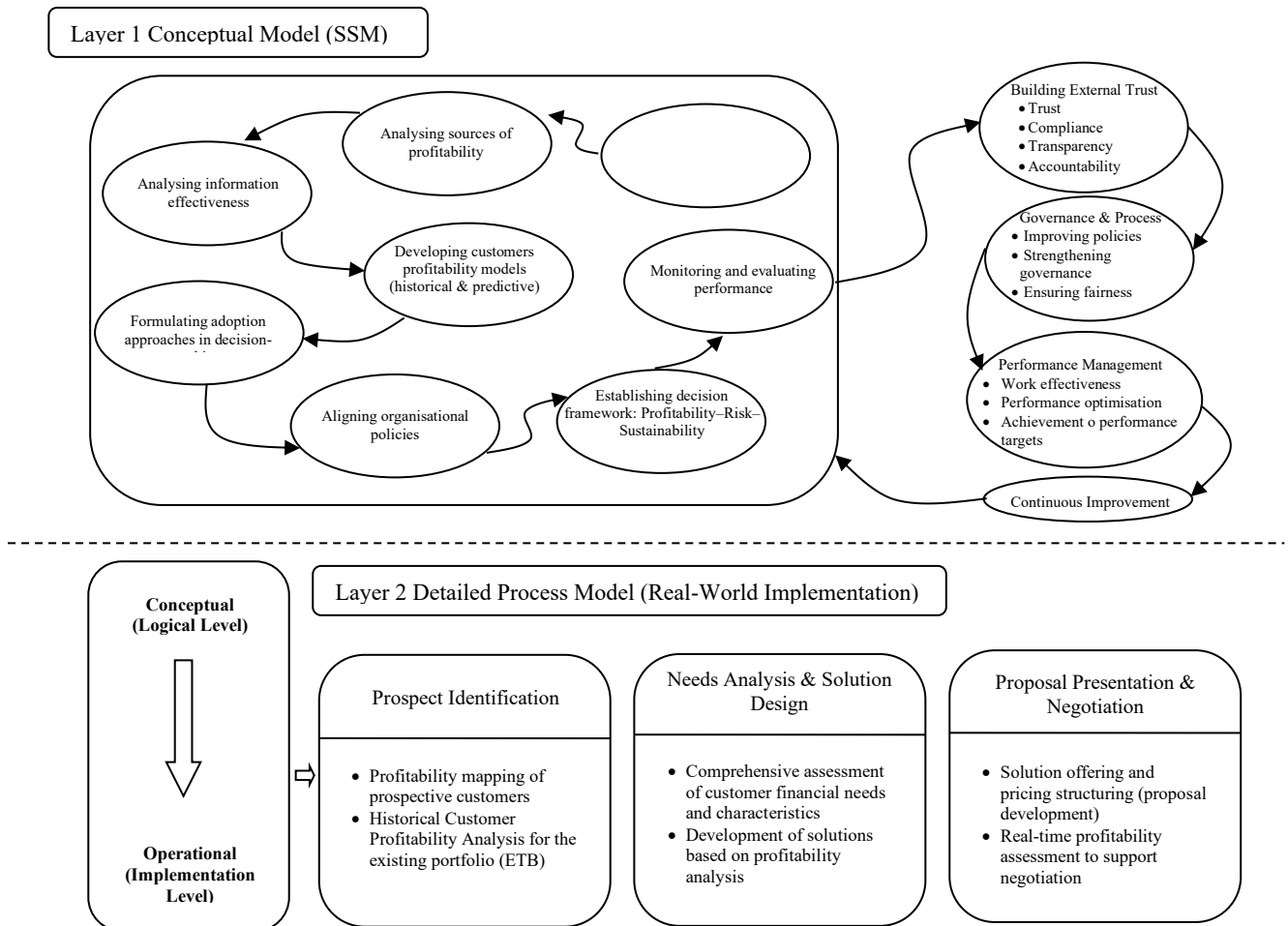
**Table 1.**  
*Condensed CATWOE Analysis for the Three Root Definitions in the Customer Profitability-Based Banking Acquisition System*

| Stage                                        | C<br>(Customers)                             | A (Actors)                                             | T<br>(Transformation)                                                                             | W<br>(Weltanschauung)                                                                                                                             | O (Owners)                                         | E<br>(Environment)                                                                                    |
|----------------------------------------------|----------------------------------------------|--------------------------------------------------------|---------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| RD1: Prospect Identification & Qualification | Bank management; Relationship Managers (RMs) | RMs; Credit analysts; Data & analytics team            | Volume-based prospect lists → Profitability-screened qualified prospects                          | Profitability-based prospect selection → improves portfolio quality and reduces acquisition of loss-making customers                              | Corporate banking division head; Senior management | Regulatory constraints; market competition; data availability; internal KPI frameworks                |
| RD2: Needs Analysis & Solution Design        | Corporate customers; Internal product teams  | RMs; Product specialists; Operations; Finance          | Siloed product proposals → Integrated ecosystem-based package-deal with predictive CPA            | Holistic solution design maximizes total customer profitability rather than individual product margins                                            | Corporate banking head; Product division heads     | Cross-segment organizational silos; limited data integration; system interoperability constraints     |
| RD3: Proposal & Negotiation                  | Corporate customers; Bank senior management  | RMs; Pricing teams; Finance controllers; Risk officers | Negotiation without profitability reference → Real-time profitability-simulated deal optimization | Every negotiated agreement should generate optimal overall value, even if individual products operate as loss leaders within a profitable package | Corporate banking division head; Finance director  | Pricing regulations; competitive pressure; IT system limitations; compensation structure misalignment |

### Conceptual Model

Based on the Root Definition formulated in the previous stage ([Appendix 1](#)) [table 1](#), this study develops a conceptual model of integrated historical and predictive Customer Profitability Analysis (CPA) within the banking customer acquisition process. The model is designed to address the key issue identified earlier, namely the lack of integration of profitability analysis in decision-making across three critical stages: prospect identification, needs analysis, and proposal and negotiation ([figure 2](#)). This aligns with prior studies highlighting that customer-level profitability integration is essential for improving strategic decision-making and long-term performance ([Demydyuk & Carlback, 2024](#)).

The model comprises several interconnected activities, including the formulation of profitability-based acquisition policies, the identification and processing of relevant data sources (revenue, cost, and risk), and the evaluation of data quality to ensure reliable analysis. These activities support a transition from a volume-driven approach to a value-based approach, as emphasised in the literature on profit-driven decision-making.



**Figure 2.** Conceptual and Operational Model of Customer Profitability Based on Soft Systems Methodology (SSM)

A key feature of the model is the integration of historical CPA, used to evaluate existing customer performance, and predictive CPA, used to estimate the future profitability of prospective customers. This integration enables a more comprehensive and forward-looking assessment of customer value, addressing the limitations of traditional backward-looking CPA models.

Furthermore, the model incorporates the development of integrated solution packages (package-deals) supported by real-time profitability simulation. This capability allows decision-makers, particularly Relationship Managers, to evaluate alternative scenarios and optimise pricing and product configurations based on their impact on overall profitability. Such an approach is consistent with emerging research advocating the integration of predictive analytics and profitability optimisation in business decision-making.

The model also emphasises the need for organisational alignment and cross-functional integration to overcome silo-based decision-making. Continuous monitoring and evaluation mechanisms are embedded to ensure adaptability and sustainability. Overall, this conceptual model provides an integrated framework that links profitability analysis with the customer acquisition process, enabling more effective, data-driven, and value-oriented decision-making.

### Comparison of Conceptual Models with the Real World and Formulation of Improvements

Conceptual models in Soft Systems Methodology (SSM) are not intended to be a complete

representation of the real world, but rather an abstraction of the system of human activities relevant to the problematic situation. Therefore, this stage aims to compare the conceptual model with actual conditions to identify existing gaps and formulate feasible and desirable improvements (Table 2).

**Table 2.**

*Comparative Analysis of Current Practices and Proposed Customer Profitability Model*

| Stage                                   | Current Practice (Real World)                                                                                              | Key Gaps                                                                                                                    | Proposed Improvements                                                                                                                      |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Prospect Identification & Qualification | Customer identification conducted without structured profitability analysis; limited and partial use of profitability data | Absence of standardised profitability framework; no historical and predictive CPA models                                    | Develop standardised customer profitability framework; implement historical CPA (ETB) and predictive CPA (ETB & NTB)                       |
| Needs Analysis & Solution Design        | Customer analysis conducted, but fragmented and not fully integrated across ecosystem and product segments                 | Suboptimal total solution design; lack of cross-segment integration; absence of predictive profitability in decision-making | Integrate ecosystem-based analysis; strengthen cross-segment collaboration; embed predictive CPA in solution design                        |
| Proposal & Negotiation                  | Pricing and negotiation not based on profitability analysis; limited visibility of profitability impact                    | Inability to assess real-time profitability; lack of coordination across products; no mechanism for loss leader products    | Implement real-time profitability simulation; develop bundled solution strategy; introduce compensation mechanism for loss leader products |

The comparison results indicate that the implementation of Customer Profitability Analysis (CPA) in the current environment remains partial and has not yet been fully integrated at the corporate level. Some key gaps include the absence of standardized customer profitability analysis, limitations in the predictive CPA model, and suboptimal data integration and cross-unit collaboration. Additionally, the decision-making process during the acquisition phase remains dominated by a volume-based approach rather than profitability.

To address these gaps, several improvement activities are proposed, including the development of standardized historical and predictive CPA models, the implementation of real-time profitability analysis tools, and the strengthening of cross-unit integration in the design of package-deal solutions. These improvements are expected to enhance the quality of value-based decision-making and support the achievement of a more sustainable growth strategy.

### Formulation of General Policies

In this stage of the SSM was not fully implemented in this study due to limitations in scope and time. However, to enrich the analysis results, this study proposes several conceptual general policies to serve as guidelines for implementing the resulting model. Customer profitability analysis in this study is divided into two main approaches: historical CPA and predictive CPA. Historical CPA is used to measure the profitability of existing customers based on actual performance, while predictive CPA is used to estimate the profitability of customers in the future or during the acquisition process.

#### 1. Historical Customer Profitability (CP(h))

This measure evaluates the profitability of the existing customer portfolio based on realised performance:

$$CP(h)=TR-DC-IC-AC-RP(CKPN)$$

Where:

- $TR$  = Total Revenue
- $DC$  = Direct Costs
- $IC$  = Indirect Costs
- $AC$  = Acquisition Costs
- $RP (CKPN)$  = Risk Premium based on Allowance for Impairment Losses

## 2. Predictive Customer Profitability (CP(p))

This measure estimates the future profitability of customers, particularly prospective or newly acquired customers:

$$CP(p)=TR-DC-IC-AC-RP(ECL)$$

Where:

- $TR$  = Total Revenue
- $DC$  = Direct Costs
- $IC$  = Indirect Costs
- $AC$  = Acquisition Costs
- $RP (ECL)$  = Risk Premium based on Expected Credit Loss

The integration of credit risk components, particularly Expected Credit Loss (ECL), into the CPA model provides added value compared to conventional approaches. This model enables more accurate and risk-based profitability measurement, in line with IFRS 9 and PSAK 71 standards. Consequently, banks can improve the quality of decisions regarding customer segmentation, pricing, and portfolio management in a more proactive manner.

Customer profitability analysis enables banks to allocate resources more efficiently by distinguishing between profitable and unprofitable customers (table 2) (Table 3). Not all customer demands can be served profitably; therefore, organizations may need to adjust pricing, redesign processes, or selectively decline certain business opportunities. Newly acquired customers may initially appear unprofitable due to high acquisition costs but can still be retained based on their long-term value potential. In contrast, persistently unprofitable customers require strategic intervention, such as pricing adjustments or service optimization. By integrating profitability with target market segmentation, firms can priorities profitable customers within target segments while monitoring or deprioritizing others. This approach also highlights opportunities to transform unprofitable customers into profitable ones. Overall, profitability-based segmentation provides critical feedback for improving market strategy effectiveness and supports sustainable, value-driven decision-making.

**Table 3.**

*Segmented Target and Profitability*

| Customers          | Profitable | Unprofitable |
|--------------------|------------|--------------|
| Targeted Segment   | Retain     | Transform    |
| Untargeted Segment | Monitor    | Eliminate    |

## Discussion

### Managerial Implication

This study underscores the urgency of strategic changes in the banking sector's approach to customer management and acquisition. The primary managerial implications center on optimizing the use of historical and predictive Customer Profitability Analysis (CPA) across the entire sales chain.

First, a shift in the KPI paradigm. Top management must adopt Customer Profitability as the primary financial performance indicator (KPI) at the corporate level, replacing or at least complementing the exclusive focus on Unit Profitability. This KPI must be cascaded down to all operational levels, including divisional and sales teams, to ensure the entire organization shares aligned objectives in optimizing customer profitability.

Second, Development and Implementation of an Integrated CPA Model. The bank must design and implement a conceptual model for both historical and predictive CPA at the corporate level that is fully integrated into the sales business process. This model must be capable of

analyzing the profitability of both existing customers (ETB) and new-to-bank customers (NTB) and accurately account for various cost factors (including service acquisition costs) and, most importantly, credit risk (ECL / CKPN), in accordance with IFRS 9 / PSAK 71 standards.

Third, Empowering Relationship Managers (RMs) with real-time decision-support tools. RMs need to be equipped with integrated, user-friendly IT applications capable of providing real-time profitability simulations. This tool will be used during the proposal presentation and negotiation phases to evaluate the financial impact of any concessions or counter-offers from customers, as well as to provide data-driven justifications for loss-leader products within the context of a package deal that is profitable overall.

Fourth, Profitability-Based Acquisition Process Optimization. During the prospect identification and qualification phase, management must apply CPA to map and qualify customers/prospects based on their profitability potential, not just business volume. Notwithstanding the above implications, the adoption of an integrated CPA model in banking practice entails several implementation challenges that must be addressed proactively. First, data availability and quality represent a critical prerequisite: the proposed model requires the integration of granular revenue, cost, and risk data at the individual customer level, which may not be readily available in legacy core banking systems.

Institutions will need to invest in data infrastructure and master data management capabilities to enable consistent, real-time profitability calculation. Second, organizational change management is essential, as shifting from volume-based to value-based performance evaluation requires aligned incentives and cultural change at all levels, from frontline RMs to senior leadership. Third, the development of predictive CPA capabilities necessitates access to qualified data scientists or external analytics partners, which may pose resource constraints for smaller institutions. Phased implementation is therefore recommended: beginning with the standardization of historical CPA reporting, then progressively integrating predictive analytics capabilities, and finally embedding real-time profitability simulation into RM decision-support systems.

## CONCLUSION

This study develops an integrated Customer Profitability Analysis (CPA) framework that combines historical and predictive profitability assessment to support value-based customer acquisition in the banking sector. The findings indicate that existing CPA implementation remains predominantly historical and is constrained by the absence of standardised profitability frameworks, limited predictive capabilities, fragmented information integration, and silo-based decision-making. These conditions limit the ability of banks to assess the economic value of prospective customers during acquisition. By applying Soft Systems Methodology (SSM), the study proposes an integrated framework that connects profitability assessment with prospect identification and qualification, needs analysis and solution design, and proposal presentation and negotiation. The framework also incorporates package-deal evaluation and profitability simulation to support more informed acquisition decisions.

Theoretically, this study extends CPA research by positioning customer profitability as a process-embedded decision-support instrument rather than merely a historical performance measurement tool. Practically, the proposed framework provides a basis for banks to integrate profitability information, predictive assessment, and cross-functional decision-making into customer acquisition processes. For Relationship Managers and bank management, this approach can support the identification and prioritisation of prospective customers based on their potential economic value and improve the evaluation of proposed customer packages. Overall, integrating historical and predictive CPA can strengthen value-oriented acquisition decisions, improve customer portfolio quality, and support more sustainable banking growth.

## ACKNOWLEDGEMENT

The authors sincerely thank the reviewers for their constructive comments, critical evaluation, and valuable suggestions, which contributed significantly to improving the quality and clarity of this manuscript. The authors also express their appreciation to the management and Relationship Manager teams of the two national commercial banks that participated as research

sites for their time, cooperation, and organizational insights. The authors gratefully acknowledge all parties who supported the completion of this research and manuscript. No institutional or external funding was received for this research.

#### **AUTHOR CONTRIBUTION STATEMENT**

Rudianto Suryo Binantoro contributed to conceptualization, research design, theoretical framework development, data collection, data analysis, and manuscript preparation. Syamsul Ma'arif contributed to the literature review, research methodology, data collection, CATWOE analysis, and formulation of the root definitions. Linda Karlina Sari contributed to data interpretation, development and refinement of the conceptual model, discussion, and manuscript review. Zenal Asikin contributed to literature review, analysis of the research findings, manuscript revision, and critical review of the final manuscript. All authors contributed to the revision of the manuscript, critically reviewed the final version, and approved the manuscript for publication.

#### **REFERENCES**

- Ali, N., & Shabn, O. S. (2024). Customer lifetime value (CLV) insights for strategic marketing success and its impact on organizational financial performance. *Cogent Business and Management*, 11(1). <https://doi.org/10.1080/23311975.2024.2361321>
- Awais, M. (2024). Customer acquisition strategies for tech start-ups: Analyzing the effectiveness of different customer acquisition channels using advanced analytics. *Qlantic Journal of Social Sciences and Humanities*, 112–123.
- Checkland, P. (1988). System Thinking, System Practice. *Departemen of Systems University of Lancaster*.
- Checkland, P., & Poulter, J. (2006). A Short Definitive Account of Soft Systems Methodology and its use for Practitioners, Teachers and Students. In *A short definitive account of SSM*.
- Chinta, P. C. R. (2023). Leveraging machine learning techniques for predictive analysis in merger and acquisition (M&A). *Journal of Artificial Intelligence and Big Data*, 3(1).
- Demydyuk, G. V., & Carlback, M. (2024). Balancing short-term gains and long-term success in lodging: The role of customer satisfaction and price in hotel profitability model. *Tourism Economics*, 30(4). <https://doi.org/10.1177/13548166231199156>
- Fast, V., Schnurr, D., & Wohlfarth, M. (2023). Regulation of data-driven market power in the digital economy: Business value creation and competitive advantages from big data. *Journal of Information Technology*, 38(2). <https://doi.org/10.1177/02683962221114394>
- Gómez Vargas, N. (2025). *Combining Machine Learning and Optimization Techniques for Decision-Making in Uncertain Scenarios*.
- Helgesen, Ø. (2007). Customer accounting and customer profitability analysis for the order handling industry-A managerial accounting approach. *Industrial Marketing Management*, 36(6). <https://doi.org/10.1016/j.indmarman.2006.06.002>
- Kamal, M. (2025). Financial Vulnerability Mapping in Global Supply Chains: Implications for US Trade Stability and Investment Risk. *ASRC Procedia: Global Perspectives in Science and Scholarship*, 1636–1667.
- Kaplan, R. S., and D. P. N. (1996). *The balanced scorecard: translating strategy into action*. Language 11.
- Lueg, R., & Ilieva, D. (2024). Customer Profitability Analysis in decision-making-The roles of customer characteristics, cost structures, and strategizing. *PLoS ONE*, 19(5 May). <https://doi.org/10.1371/journal.pone.0296974>
- McKinsey Global Institute. (2016). The Age of Analytics: Competing in a Data-Driven World, Executive Summary. *McKinsey & Company, Brussels*, (December).
- Papadakis, V. M., & Thanos, I. C. (2010). Measuring the performance of acquisitions: An empirical investigation using multiple criteria. *British Journal of Management*, 21(4). <https://doi.org/10.1111/j.1467-8551.2009.00671.x>
- Raffoni, A., Visani, F., Bartolini, M., & Silvi, R. (2018). Business Performance Analytics: exploring the potential for Performance Management Systems. *Production Planning and Control*, 29(1). <https://doi.org/10.1080/09537287.2017.1381887>
- Rodriguez-Garcia, P., Lopez-Lopez, D., & Martin Solano, J. A. (2025). Artificial Intelligence

- in Marketing Strategic Decisions via Product Portfolio Optimization. *Lecture Notes in Computer Science (Including Subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, 14778 LNCS. [https://doi.org/10.1007/978-3-031-78238-1\\_7](https://doi.org/10.1007/978-3-031-78238-1_7)
- Sargeant, H. (2023). Algorithmic decision-making in financial services: economic and normative outcomes in consumer credit. *AI and Ethics*, 3(4). <https://doi.org/10.1007/s43681-022-00236-7>
- Sorescu, A. (2017). Data-driven business model innovation. *Journal of Product Innovation Management*, 34(5), 691–696.
- van Raaij, E. M., Vernooij, M. J. A., & van Triest, S. (2003). The implementation of customer profitability analysis: A case study. *Industrial Marketing Management*, 32(7). [https://doi.org/10.1016/S0019-8501\(03\)00006-3](https://doi.org/10.1016/S0019-8501(03)00006-3)
- Viviani, J. L., Komura, A., & Suzuki, K. (2023). Integrating dynamic segmentation and portfolio theories for better customer portfolio performance. *Journal of Strategic Marketing*, 31(1). <https://doi.org/10.1080/0965254X.2021.1881148>